A Fuzzy Delphi Approach to Social Cohesion Among Malay Muslims in Malaysia

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Abstract

Existing research on social cohesion in Malaysia often examines it at the national level, with a strong emphasis on inter-ethnic relations. However, there is a significant gap in studies th at focus solely on intra-ethnic cohesion within the Malay-Muslims community. This study addresses that gap by developing and validating, through expert consensus, a new instrument to measure intra-ethnic cohesion. The study employs a quantitative design using the Fuzzy Delphi Method with a 7-point Likert scale, involving 10 carefully selected experts. Data were analysed using triangular fuzzy numbers and defuzzification ranking. Findings show that all elements of the proposed construct such as self-belonging, inclusivity, organizational/ political participation, recognition, legitimacy and equality has reached expert consensus. The agreement level exceeded 75%, the threshold value was below 0.2 (d<0.2) and the fuzzy score (A) was greater than the a-cut value of 0.5. These results provide a foundation for developing a structured framework for measuring social cohesion within the Malay-Muslim community in Malaysia. This article reports Phase 1 of instrument development, highlighting its limitations and future directions for full psychometric validation.

INTRODUCTION

Social cohesion refers to a process that involves the formation of a society that shares values, challenges, and opportunities equally, based on trust, expectations, and mutually trusting relationships among its members (Beauvais & Jenson, 2002; Fonseca et al., 2019; Jenson, 1998; Stanley, 2003). Social cohesion is viewed more as an ongoing process rather than a fixed state or final outcome. It involves the commitment, willingness, and ability of a society to live together in harmony. Jenson (1998) also stated that social cohesion is a response to issues such as economic inequality, social fragmentation, and the loss of trust in public institutions, which often arise due to structural economic and social changes. In this context, social cohesion becomes essential for maintaining social stability and fostering cooperation among various groups within society. In addition, Bernard (1999) stated that social cohesion is a concept often used to understand how societies can live together harmoniously despite individual and group differences. It encompasses key dimensions such as solidarity, equality, and freedom, which interact dynamically in democratic societies.

Social cohesion has become an increasingly important concept in multi-ethnic societies, including Malaysia. While much of the literature has focused on inter-ethnic relations, less attention has been paid to intra-ethnic cohesion, particularly withing the Malay-Muslim community, which constitutes the majority population in Malaysia. Understanding intra-ethnic cohesion is crucial, as internal fragmentation within a majority group may have broader implications for national unity, stability and social development.

Mills (1959) introduced the sociological imagination as the ability to link personal experience with larger structures. Applying this idea to social cohesion allows us to view intra-ethnic dynamics as not merely interpersonal or cultural issues but as a reflection of broader socio-political divides, religious orientations or political affiliations within the Malay-Muslims community. Such internal differences, if unaddressed, can weaken the community's collective ability to contribute to broader inter-ethnic integration.

In the Malaysian context, social cohesion has been translated and popularized by renowned anthropologist and sociologist Shamsul Amri Baharuddin (2021). Social cohesion is defined as a state of peace, stability, and prosperity that exists within a society, particularly one that is multi-ethnic, due to the presence of strong social bonding that has been established over time. Social cohesion is a set of processes and actions capable of fostering a sense of belonging among every member of a society, making them feel as though they are an integral part of that community (Khaile et al., 2021; Orazani et al., 2023; Schiefer & van der Noll, 2017). This implies that social cohesion is a continuous process that demands ongoing efforts to build shared values, enabling members to face life's challenges together and collaboratively seek solutions that benefit everyone.

Past research in Malaysia had often framed social cohesion at the macro level, highlighting the challenges and successes of inter-ethnic relations (Baharuddin, 2008; Noor & Leong, 2013). However, cohesion within the majority group remains understudied, despite evidence that intra-group fragmentation can disrupt social harmony. This study aims to fill that gap by developing an instrument that measures intra-ethnic cohesion in a systematic and quantifiable manner. By focusing on the Malay-Muslim community, this study not only contributes theoretically to the measurement of cohesion but also

offers practical insight for policymakers seeking to strengthen national unity from the inside out.

Furthermore, the Malay Muslim community is often viewed as a dominant group in terms of culture, religion, and politics. Policies such as the New Economic Policy (DEB) emphasize social cohesion between ethnic groups, leading to less attention being paid to internal issues within the Malay Muslim community, such as economic disparities or unequal opportunities. The exploration of the concept of social cohesion within the Malay Muslim community in Malaysia remains limited due to the perception that this community is already stable and united, alongside a greater focus on inter-ethnic relations.

The objective of this paper is therefore twofold which is first to conceptualize intra-ethnic cohesion through six constructs, self-belonging, inclusivity, participation, recognition, legitimacy, and equality. Second is to validate the content of these constructs using the Fuzzy Delphi Method. The paper presents the first phase of instrument development, with future studies planned to test the instrument's psychometric properties among the Malay-Muslim population in Malaysia.

LITERATURE REVIEW

The concept of social cohesion has been widely debated in sociology, political science, and development studies. Broadly, it refers to the degree of connectedness and solidarity among groups in society (Chan et al., 2006). Durkheim (1997) highlighted cohesion as a form of social integration, linking it to collective consciousness and moral regulation. In contemporary scholarship, social cohesion has been associated with social capital, trust, participation, inclusivity, and equality (Linssen et al., 2015; Putnam, 2000; Schmeets & te Riele, 2014).

Several approaches to measuring social cohesion have been developed internationally. Chan et al. (2006) propose a framework distinguishing between the objective conditions of society and subjective perceptions of belonging. Berger-Schmitt (2002) outlines two dimensions: reducing disparities and strengthening social relations. Jenson (1998) identifies five key aspects: belonging, inclusion, participation, recognition, and legitimacy, many of which resonate strongly with the constructs used in this study.

In the Malaysian context, Baharuddin (2008, 2010) emphasizes the 'two social realities' framework: the authority-defined reality (policy narratives of unity) and the everyday-defined reality (lived experiences of ethnic interaction). While much research has examined inter-ethnic dynamics such as Malay-Chinese or Malay-Indian relations and little attention has been devoted to intra-ethnic cohesion, especially among the Malay-Muslims, despite being the demographic majority. Recent debates on political polarization, Islamic revivalism, and socio-economic inequalities within the Malay community suggest that intra-ethnic fragmentation is a pressing concern that requires systematic study.

The constructs chosen for this study draw upon both international and local literature to ensure conceptual rigor and cultural relevance. Self-belonging reflects Durkheim's (1997) concept of collective identity and attachment, which emphasizes how individuals derive meaning and solidarity from their integration into a social group. Belonging is not only about membership but also about a sense of emotional attachment and moral obligation toward the collective. In the Malay-Muslim context, this sense of belonging is reinforced through shared religious values, language, and traditions, which strengthen communal identity (Baharuddin, 2008; Embong, 2002).

Inclusivity and recognition are informed by Fraser's (1997) theory of justice, which argues that a just society must not only ensure equitable distribution of resources but also recognition of cultural and identity-based differences. Recognition involves acknowledging and valuing diverse contributions within the community, while inclusivity ensures that no subgroup is marginalized (Bétrisey et al., 2018; Hanesworth et al., 2019; Miri, 2024). Within the Malay-Muslim community, inclusivity encompasses acceptance of differences in political orientation, socio-economic status, and even variations in religious practice. Recognition is also crucial in validating the roles of women, youth, and minority voices within the broader Malay-Muslim society (Noor & Leong, 2013).

Participation draws heavily on Putnam's (2000) theory of social capital and civic engagement, which posits that networks of participation build trust, cooperation, and reciprocity within a community. Civic engagement whether in formal organizations, religious groups, or informal associations creates opportunities for dialogue and collective problem-solving. In the Malay-Muslim setting, participation not only refers to political involvement but also extends to religious organizations (such as mosque committees), cultural associations, and voluntary activities, all of which are central arenas for fostering cohesion (Embong, 2002).

Legitimacy and equality resonate with Jenson's (1998) dimensions of social cohesion, which highlight the importance of democratic inclusion and fair treatment as pillars of cohesive societies. Legitimacy concerns the extent to which community leadership and institutions are perceived as fair, transparent, and accountable. Without legitimacy, members may feel alienated from decision-making processes. Equality, on the other hand, refers to the fair distribution of opportunities and rights across social groups. In the context of the Malay-Muslims, legitimacy involves trust in leaders and

religious authorities (Altabaa & Idid, 2019, 2020; Brown, 2010; Pama et al., 2024; Shukri, 2023), while equality reflects perceptions of fairness across gender, class, and regional divides (Çakın et al., 2024; Lussier & Fish, 2016; Nik Mat et al., 2023; Schleimer, 2020).

These six constructs were then operationalized into questionnaire items designed to capture the cultural and religious specificities of the Malay-Muslim society. For example, self-belonging in this context is linked not only to ethnic Malay identity but also to membership in the ummah (the global Muslim community). Participation, similarly, goes beyond political activities to include engagement in religious and cultural organizations that play a central role in community life. By grounding the instrument in both international theories and local realities, the study ensures that the measures of intra-ethnic cohesion are both conceptually sound and contextually relevant.

The literature thus provides both the theoretical justification and the empirical precedent for the items included in the instrument. By situating the constructs in established sociological and political theories while adapting them to Malaysia's context, the study ensures both conceptual rigor and cultural relevance.

METHOD

Study Design

This study employed the Fuzzy Delphi Method (FDM) to validate questionnaire items measuring social cohesion among Malay-Muslims. The Delphi technique is well established for expert consensus building (Linstone, 1985; Linstone & Turoff, 1975), and its fuzzy adaptation (Ishikawa et al., 1993) allows for more nuanced handling of expert uncertainty. Additionally, the attributes of individual experts/participants can be clarified (Chang et al., 2000). This technique was applied to obtain an expert consensus in

determining the elements and items of social cohesion in order to understand the level of social cohesion within the Malay-Muslims ethnic group.

This questionnaire also underwent a content validity process by 10 experts. Content validity is crucial as it measures the accuracy of the content, the items presented, the questionnaire format used, and the applicability of the variables, ensuring clarity for respondent (Mustapha & Darusalam, 2018). A panel of 10 experts was recruited, representing sociology, political science, Islamic studies, and education. The number of experts falls within the recommended range of 10–15 for FDM (Murry & Hammons, 1995). Experts evaluated 24 initial questionnaire items across six constructs, using a 7-point Likert scale. Items were derived from theoretical models and prior empirical studies.

Data were analyzed using FUDELO software. Each response was transformed into a triangular fuzzy number (l, m, u). The threshold (d) was calculated, with values less than 0.2 indicating consensus. The α-cut value was set at 0.5, following prior studies (Cheng & Lin, 2002), meaning that items with fuzzy scores ≥ 0.5 were retained. Items not meeting these thresholds were either revised or removed. All question items are validated according to a 7-point Likert scale (from 1 = Extremely Strongly Agree) to 7 = Extremely Strongly Disagree) as shown in Table 1 below.

Table 1

Level of Consensus and Fuzzy Scale Value

Likert Scale	Level of Agreement	Fuzzy Scale
1	Extremely Strongly Agree	(0.9,1.0,1.0)
2	Strongly Agree	(0.7,0.9,1.0)
3	Agree	(0.5,0.7,0.9)
4	Moderately Agree	(0.3,0.5,0.7)
5	Disagree	(0.1,0.3,0.5)
6	Strongly Disagree	(0.0,0.1,0.3)

Likert Scale	Level of Agreement	Fuzzy Scale
7	Extremely Strongly Disagree	(0.0,0.0,0.1)

Source: Mohd Jamil & Mat Noh (2020).

Expert Demography

Expert demographic information is shown in Table 2. Experts that were involved in validating the questionnaire were carefully considered. To ensure effective research findings, the researcher verified relevant information about the experts, such as their positions and experience in fields related to the study. Half of them possessed a PhD, while others have bachelor's degrees in their respective areas of expertise. In terms of work experience, all the experts have more than ten years of experience. According to Aziz et al. (2017), an individual with over 10 years of work experience and consistent dedication in the same field is qualified to be considered an expert. The selected experts specialize in education, management and administration, public services and administration, socioeconomics and ethnic relations, as well as socio-politics and international relations. All these experts are academic and administrative staff serving at the national level within federal institutions. The experts are trained, knowledgeable and knowledgeable people, based on training, practise and experience they have gained.

Table 2

Expert Demographic Information

Level of Education	
Level	Frequency
PhD	5
Master Degree	
Bachelor Degree	5
Total	10
Work Experience	
Year	Frequency
11 to 20 years	
21 to 30 years	

31 to 40 years	6
More than 40 years	4
Total	10
Field of Expertise	
Field	Frequency
Education	3
Management & Administration	2
Public Service & Administration	2
Socioeconomics & Ethnic Relations	2
Socio-politics & International Relations	1
Total	10

Source: Primary data. Authors' analysis.

Total of 10 experts based on the recommendations of Jones & Twiss (1978). In addition, the selection of the experts is based on their ability to substantiate their opinions on the subject matters of the study or revise their initial conclusions to reach a consensus among the experts (Aziz et al., 2017).

Data Analysis

The analysis of research data for the Fuzzy Delphi method (FDM) is based on the conditions contained in the triangular fuzzy number. The conditions for the triangular fuzzy number involve the threshold value (d) and the percentage of expert consensus with the threshold value (d) for each measured item must be less than or equal to 0.2 (Ashtiani et al., 2009; Chen et al., 2022; Cheng & Lin, 2002; Wang Chen et al., 2016) and the percentage of expert group consensus must exceed or equal to 75% (Chu & Hwang, 2008; Murry & Hammons, 1995). In summary, the conditions for reaching an expert consensus are depicted in Table 3.

Table 3

Conditions of Triangular Fuzzy Numbers and Defuzzification

Requirement	Value
Threshold value (d)	≤0.2
Percent Expert Agreement	≥75%
α-cut value	≥0.5

Source: Primary data. Authors' analysis.

All the elements of the social cohesion construct among Malay-Muslims which are self-belonging, inclusivity, organizational/political participation, recognition, legitimacy and equality, obtain expert consensus with an agreement level of more than 75% percent, the threshold value is less than 0.2 (d<0.2) and the value α-cut exceeds 0.5.

RESULTS

The exploration of the concept of social cohesion in Malaysia continues to be grounded in the six elements established by Jenson (1998) and Bernard (1999). While these foundational dimensions remain consistent, their application has been thoughtfully adapted to align with the unique socio-cultural and contextual nuances of Malaysia, ensuring greater relevance and applicability in understanding social cohesion within the local framework according to the Malay-Muslim perspective using FDM.

The results indicated that all six constructs achieved expert consensus. The agreement level exceeded 75% for all items, with threshold values below 0.2 and fuzzy scores above the α-cut of 0.5. This suggests that the proposed items are valid representations of intra-ethnic social cohesion. Among the constructs, 'self-belonging' and 'recognition' received the highest consensus, reflecting the importance of identity and acknowledgment within the community.

A total of 24 items were retained in the final instrument, covering all six constructs. The validated instrument provides a preliminary but solid foundation for measuring social cohesion among Malay-Muslims, though further psychometric testing with real data is required.

Analysis of Expert Consensus on Element Self-belonging

In this self-belonging element, the items given to the experts are stated in Table 4.

Table 4

Items for the Element Self-belonging

	Items
A1	I can live in intra-racial housing area
A2	I acknowledge the cultural diversity within my own community
A3	Many socio-cultural and Islamic programs organized by my community leaders are well received.
A4	I sympathize if a neighbour from my own race passed away

Source: Primary data. Authors' analysis.

The threshold value (d), expert consensus percentage, defuzzification and item position for the above items are shown in Table 5.

Table 5

Findings of Expert Consensus on Self-belonging

Statistics	Item 1	Item 2	Item 3	Item 4
Value of the item	0.02425	0.02887	0.02194	0.02771
Value of the construct				0.02569
Item < 0.2	10	10	10	10
% of item < 0.2	100%	100%	100%	100%
Average of % consensus				100
Defuzzification	0.97	0.95	0.89	0.96
Ranking	1	3	4	2

Status		Accept	Accept	Accept	Accept

Source: Primary data. Authors' analysis.

Based on the findings in Table 5 above, all items recorded a value of Threshold (d) ≤ 0.2. This result indicates that all of these items have gained an expert consensus (Chen & Lin, 2002). The expert agreement percentage shows that all items are above 75% and all defuzzification values for items also exceed the value of α-cut = 0.5. The result shows that the items in self-belonging element have gained consensus from the experts. The items are sorted by priority as shown in Table 6.

Table 6

Items Positions by Priority

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
1	I can live in intra-racial housing area	100%	Accepted	1
2	I sympathize if a neighbour from my own race passed away.	100%	Accepted	4
3	I acknowledge the cultural diversity within my own community	100%	Accepted	2
4	Many socio-cultural and Islamic programs organized by my community leaders are well received.	100%	Accepted	3

Source: Primary data. Authors' analysis.

Analysis of Expert Consensus on Element Inclusivity

In this inclusivity element, the items given to the experts are stated in Table 7

Table 7

Items for the Element Inclusivity

	Items
A1	I find that educational opportunities to enter public universities are widely open to Malay-Muslims, ensuring equal access to higher education
A2	As a member of the Malay-Muslim community, I am not left out in obtaining opportunities to own a home
A3	Government assistance is readily available and accessible to support the needs of the Malay-Muslim community
A4	Employment opportunities in the public sector are open to Malay-Muslims, reflecting inclusivity in national service

Source: Primary data. Authors' analysis.

The threshold value (d), expert consensus percentage, defuzzification and item position for the above items are shown in Table 8.

Table 8

Findings of Expert Consensus on Inclusivity

Statistics	Item 1	Item 2	Item 3	Item 4
Value of the item	0.02425	0.05196	0.02425	0.02771
Value of the construct				0.03204
Item < 0.2	10	10	10	10
% of item < 0.2	100%	100%	100%	100%
Average of % consensus				100
Defuzzification	0.97	0.85	0.93	0.94
Ranking	1	4	3	2
Status	Accept	Accept	Accept	Accept

Source: Primary data. Authors' analysis.

Based on the findings in Table 8 above, all items recorded a value of Threshold (d) ≤ 0.2. This result indicates that all of these items have gained an expert consensus (Chen & Lin, 2002). The expert agreement percentage shows that all items are above 75% and all defuzzification values for items also exceed the value of α-cut = 0.5. The result shows

that the items in inclusivity element have gained consensus from the experts. The items are sorted by priority as shown in Table 9.

Table 9

Items Positions by Priority

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
1	I find that educational opportunities to enter public universities are widely open to Malay-Muslims, ensuring equal access to higher education	100%	Accepted	1
2	Employment opportunities in the public sector are open to Malay-Muslims, reflecting inclusivity in national service	100%	Accepted	4
3	Government assistance is readily available and accessible to support the needs of the Malay-Muslim community	100%	Accepted	3
4	As a member of the Malay-Muslim community, I am not left out in obtaining opportunities to own a home	100%	Accepted	2

Analysis of Expert Consensus on Element Organizational/Political Participation

In this organizational/political participation element, the items given to the experts are stated in Table 10

Table 10

Items for the Element Organizational/Political Participation

	Items
A1	As a Malay-Muslim, I have the liberty to vote for a candidate or party that aligns with my values and interests
A2	I am free to discuss political issues that impact the Malay-Muslim community and the nation as a whole
A3	I am free to join associations that bring together Malay-Muslims members from various backgrounds, fostering unity and mutual understanding
A4	I actively participate in activities organized by associations that promote the welfare and development of the Malay-Muslim community

Source: Primary data. Authors' analysis.

The threshold value (d), expert consensus percentage, defuzzification and item position for the above items are shown in Table 11.

Table 11

Findings of Expert Consensus on Organizational/Political Participation

Statistics	Item 1	Item 2	Item 3	Item 4
Value of the item	0.05774	0.0231	0.03117	0.04157
Value of the construct				0.03839
Item < 0.2	10	10	10	10
% of item < 0.2	100%	100%	100%	100%
Average of % consensus				100
Defuzzification	0.8	0.9	0.91	0.88
Ranking	4	2	1	3
Status	Accept	Accept	Accept	Accept

Source: Primary data. Authors' analysis.

Based on the findings in Table 8 above, all items recorded a value of Threshold (d) ≤ 0.2. This result indicates that all of these items have gained an expert consensus (Chen & Lin, 2002). The expert agreement

percentage shows that all items are above 75% and all defuzzification values for items also exceed the value of α-cut = 0.5. The result shows that the items in organizational/political participation element have gained consensus from the experts. The items are sorted by priority as shown in Table 12.

Table 12

Items Positions by Priority

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
1	I am free to join associations that bring together Malay-Muslims members from various backgrounds, fostering unity and mutual understanding	100%	Accepted	3
2	I am free to discuss political issues that impact the Malay-Muslim community and the nation as a whole	100%	Accepted	2
3	I actively participate in activities organized by associations that promote the welfare and development of the Malay-Muslim community	100%	Accepted	4
4	As a Malay-Muslim, I have the liberty to vote for a candidate or party that aligns with my values and interests	100%	Accepted	1

Source: Primary data. Authors' analysis.

Analysis of Expert Consensus on Element Recognition

In this recognition element, the items given to the experts are stated in Table 13.

Table 13

Items for the Element Recognition

	Items
A1	I identify as a Malay-Muslims As a Malay-Muslim, I embrace my faith wholeheartedly I am not ashamed to represent myself as a symbol of Malay Muslim I can respect and accept the symbols of other religions while upholding the values of my faith
A2	I acknowledge the importance of embracing the diverse perspectives within the multi-ethnic and multicultural community in this country
A3	I recognize that the state honours and appreciates individuals, including Malay-Muslims, who have made significant contributions to the nation's progress
A4	Governance and development are strengthened by the authorities, ensuring the welfare and advancement of the Malay-Muslim community alongside others

Source: Primary data. Authors' analysis.

The threshold value (d), expert consensus percentage, defuzzification and item position for the above items are shown in Table 14.

Table 14

Findings of Expert Consensus on Recognition

Statistics	Item1	Item2	Item3	Item4
Value of the item	0.01039	0.02771	0.03695	0.02771
Value of the construct				0.02569
Item < 0.2	10	10	10	10
% of item < 0.2	100%	100%	100%	100%
Average of % consensus				100
Defuzzification	0.91	0.96	0.92	0.96
Ranking	3	1	2	1
Status	Accept	Accept	Accept	Accept

Source: Primary data. Authors' analysis.

Based on the findings in Table 8 above, all items recorded a value of Threshold (d) ≤ 0.2. This result indicates that all of these items have gained an expert consensus (Chen & Lin, 2002). The expert agreement percentage shows that all items are above 75% and all defuzzification values for items also exceed the value of α-cut = 0.5. The result shows that the items in recognition element have gained consensus from the experts. The items are sorted by priority as shown in Table 15.

Table 15

Items Positions by Priority

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
1	I acknowledge the importance of embracing the diverse perspectives within the multi-ethnic and multicultural community in this country	100%	Accepted	2
2	Governance and development are strengthened by the authorities, ensuring the welfare and advancement of the Malay-Muslim community alongside others	100%	Accepted	4
3	I recognize that the state honours and appreciates individuals, including Malay-Muslims, who have made significant contributions to the nation's progress	100%	Accepted	3
4	As a Malay-Muslim, I can respect and accept the symbols of other religions	100%	Accepted	1

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
	while upholding the values of my faith			

Source: Primary data. Authors' analysis.

Analysis of Expert Consensus on Element Legitimacy

In this legitimacy participation element, the items given to the experts are stated in Table 16.

Table 16

Items for the Element Legitimacy

	Items
A1	As a Muslim, I acknowledge the existence of laws related to different religions in Malaysia.
A2	I am cautious when receiving news of government maladministration from social media, particularly when it may impact the perception and welfare of the Malay-Muslim community
A3	Non-Governmental Organizations (NGOs), including those dedicated to the Malay-Muslim community, are provided opportunities and space by the government to engage actively and contribute to society
A4	As a Malay-Muslim, I remain wary of the promises made by most politicians, especially when these promises affect the interests and development of the Malay-Muslim community

Source: Primary data. Authors' analysis.

The threshold value (d), expert consensus percentage, defuzzification and item position for the above items are shown in Table 17.

Table 17

Findings of Expert Consensus on Legitimacy

Statistics	Item 1	Item 2	Item 3	Item 4
Value of the item	0.01848	0.0485	0.0485	0.02425
Value of the construct				0.03493

Statistics	Item 1	Item 2	Item 3	Item 4
Item < 0.2	10	10	10	10
% of item < 0.2	100%	100%	100%	100%
Average of % consensus				100
Defuzzification	0.92	0.84	0.84	0.93
Ranking	2	3	3	1
Status	Accept	Accept	Accept	Accept

Source: Primary data. Authors' analysis.

Based on the findings in Table 17, all items recorded a value of Threshold (d) ≤ 0.2. This result indicates that all of these items have gained an expert consensus (Cheng & Lin, 2002). The expert agreement percentage shows that all items are above 75% and all defuzzification values for items also exceed the value of α-cut = 0.5. The result shows that the items in legitimacy element have gained consensus from the experts. The items are sorted by priority as shown in Table 18.

Table 18

Items Positions by Priority

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
1	As a Malay-Muslim, I remain wary of the promises made by most politicians, especially when these promises affect the interests and development of the Malay-Muslim community	100%	Accepted	4
2	As a Muslim, I acknowledge the existence of laws related to different religions in Malaysia.	100%	Accepted	1
3	I am cautious when receiving news of government maladministration from	100%	Accepted	2

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
	social media, particularly when it may impact the perception and welfare of the Malay-Muslim community			
4	Non-Governmental Organizations (NGOs), including those dedicated to the Malay-Muslim community, are provided opportunities and space by the government to engage actively and contribute to society	100%	Accepted	3

Source: Primary data. Authors' analysis.

Analysis of Expert Consensus on Element Equality

In this organizational/political participation element, the items given to the experts are stated in Table 19.

Table 19

Items for the Element Equality

	Items
A1	The best students get scholarships to enrol in Higher Learning Institutions
A2	As a Malay-Muslim, I can easily seek assistance from the police when in need or facing difficulties, ensuring my safety and security
A3	The poverty gap between the Malay-Muslim community and other races remains a significant concern that requires targeted attention and intervention
A4	The presence of foreign workers is perceived to reduce job opportunities for Malay-Muslims, especially in sectors traditionally dominated by locals

Source: Primary data. Authors' analysis.

The threshold value (d), expert consensus percentage, defuzzification and item position for the above items are shown in Table 20.

Table 20

Findings of Expert Consensus on Equality

Statistics	Item 1	Item 2	Item 3	Item 4
Value of the item	0.02887	0.03695	0.02425	0.04388
Value of the construct				0.03349
Item < 0.2	10	10	10	10
% of item < 0.2	100%	100%	100%	100%
Average of % consensus				100
Defuzzification	0.95	0.86	0.97	0.89
Ranking	2	4	1	3
Status	Accept	Accept	Accept	Accept

Source: Primary data. Authors' analysis.

Based on the findings in Table 20, all items recorded a value of Threshold (d) ≤ 0.2. This result indicates that all of these items have gained an expert consensus (Chen & Lin, 2002). The expert agreement percentage shows that all items are above 75% and all defuzzification values for items also exceed the value of α-cut = 0.5. The result shows that the items in equality element have gained consensus from the experts. The items are sorted by priority as shown in Table 21.

Table 21

Items Positions by Priority

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
1	The poverty gap between the Malay-Muslim community and other races remains a significant concern that	100%	Accepted	3

Sort by priority	Items	Expert Consensus (%)	Status	Item Number
	requires targeted attention and intervention			
2	The best students get scholarships to enroll in Higher Learning Institutions.	100%	Accepted	1
3	The presence of foreign workers is perceived to reduce job opportunities for Malay-Muslims, especially in sectors traditionally dominated by locals	100%	Accepted	4
4	As a Malay-Muslim, I can easily seek assistance from the police when in need or facing difficulties, ensuring my safety and security	100%	Accepted	2

Source: Primary data. Authors' analysis.

DISCUSSION

This study contributes to the literature by addressing the often-overlooked dimension of intra-ethnic cohesion, specifically within the Malay-Muslim community. While much attention has been devoted to inter-ethnic relations in Malaysia, intra-ethnic dynamics play an equally important role in sustaining broader national unity. The validated instrument adds value by offering a context-specific tool for future empirical studies. The study identifies six critical elements which is self-belonging, inclusivity, organizational/political participation, recognition, legitimacy, and equality derived from established social cohesion frameworks (Bernard 1999; Jenson 1998) as shown in Figure 1.

Figure 1

Elements of Social Cohesion Construct
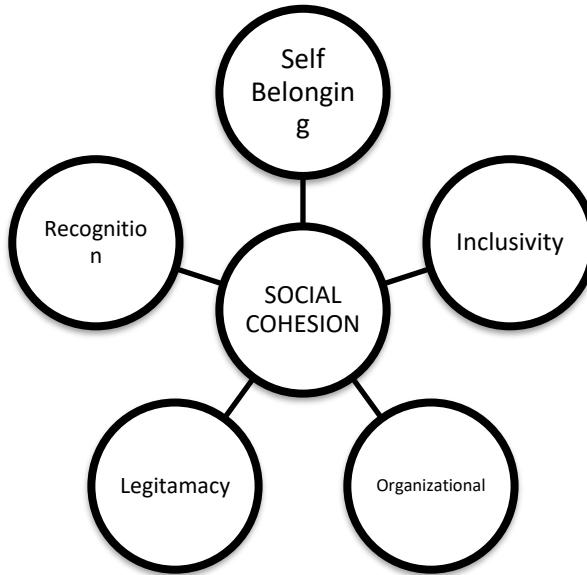
Source: Jenson (1998).

These elements provide a comprehensive lens for assessing cohesion while adapting to the unique socio-cultural and religious context of the Malay-Muslim community also as a vital construct for understanding and enhancing unity within the Malay-Muslim community in Malaysia. Each element offers unique insights into the factors influencing intra-group cohesion, reflecting the socio-cultural and political context of the community.

The element of sense of belonging reflects the role of Malay religion and culture in strengthening social relationships, making each individual feel they are part of the Malay Islamic community. Baharuddin (2012) emphasizes how Islam and Malay customs form the core of collective identity, strengthening the sense of belonging among the Malays. Practices like congregational prayers and mutual assistance help foster a sense of togetherness. This element highlights the importance of personal and communal identity. It emphasizes

living harmoniously within one's racial or cultural group, acknowledging internal diversity, and actively engaging in socio-cultural and religious activities. The findings underscore the role of shared identity in fostering a sense of belonging and emotional connection among members of the community. Such a sense of unity is foundational for collective action and mutual support.

Inclusivity reflects equitable access to opportunities, such as education, housing, and employment, ensuring no member feels excluded. For the Malay-Muslim community, the study highlights widespread accessibility to public services and government assistance as key components of inclusivity. This element underscores the need to address systemic disparities to ensure all members feel valued and supported, reinforcing trust and reducing potential grievances. Policies like the New Economic Policy (DEB) aim to ensure the participation of Malays in economic, educational, and social sectors, reducing feelings of marginalization (Lee, 2022, 2023; Thillainathan & Cheong, 2020). The inclusion element aligns with efforts to ensure that all members of the Malay community, regardless of background, feel accepted in the development and societal life.

The organizational/political participation element also relevant here as it involves active engagement of Malay individuals in their communities, through education, economy, and social activities. Abu Bakar (2015) highlights the role of educational institutions and extracurricular activities in promoting active participation of the Malay community, particularly in social and political development. The study reveals that freedom to vote, discuss political issues, and join associations strengthens participation and unity. Empowering members to take part in decision-making processes not only reinforces trust in institutions but also fosters a sense of agency and shared responsibility in community development.

Recognition involves respecting diverse perspectives and appreciating individual and communal contributions to society. The study emphasizes the importance of valuing the achievements and cultural symbols of the Malay-Muslim community while promoting tolerance for other groups. Recognition fosters mutual respect and strengthens inter- and intra-group cohesion, laying a foundation for peaceful coexistence and collaboration. This element relates to how the identity and rights of the Malay people are respected and upheld within the social and political system, reflecting recognition of their contributions. Ahmad (2006) discusses the importance of Malay political identity as an element recognized in national policies, giving recognition to the rights and status of the Malays in the Malaysian Constitution.

Other than that, legitimacy pertains to trust in institutions, laws, and governance processes. The study highlights the role of legitimate governance, acknowledgment of religious laws, and caution against misinformation in maintaining social cohesion. Ensuring transparency and accountability in leadership helps reinforce trust and mitigates conflicts that may arise from perceived injustices or unequal treatment. Baharuddin (2012) emphasizes how institutions such as the government, mosques, and schools play a crucial role in maintaining the legitimacy of leadership and social structures within the Malay society. It indicates that the stability and social cohesion among the Malays depend on their trust in the institutions that manage their life and societal values.

The last element of the social cohesion construct by Bernard (1999) and Jenson (1998) is equality. Equality addresses the need for fairness in opportunities, resource distribution, and societal treatment. Policies such as the NEP aim to reduce economic disparities between Malays and other ethnic groups, as well as within the Malay community itself. It emphasizes the importance of fair and equal

opportunities, particularly in access to education, employment, and the economy, to ensure sustainable social cohesion (Awang et al., 2016; Jomo, 2011; Lee, 2024; Roknifard, 2023). Researchers identify concerns such as economic disparities and competition from foreign workers as factors affecting perceptions of equality. Addressing these issues requires targeted policies to close gaps and create an environment where all members can thrive equally.

The six elements are deeply interrelated, collectively contributing to a cohesive community framework. Methodologically, the use of the Fuzzy Delphi Method enhanced the rigor of expert validation, enabling nuanced evaluation of item relevance. However, the reliance on expert consensus alone represents an early stage of instrument development. Construct validity (factor analysis), reliability (Cronbach's alpha), and criterion validity with empirical data remain essential next steps.

Limitations and Future Research

The main limitation of this study is that it reports only the development and content validation phase. The questionnaire has not yet been applied to a broader sample of the target population. Therefore, conclusions about construct validity and reliability cannot yet be drawn. Future research should include pilot testing with a representative sample, followed by exploratory and confirmatory factor analyses. Reliability testing (e.g., Cronbach's alpha) should also be conducted. Moreover, criterion validity could be examined by comparing results with related measures of social cohesion or social capital.

CONCLUSION

The study developed and validated, through expert consensus, a new instrument to measure intra-ethnic cohesion among Malay-

Muslims in Malaysia. The study confirm that six keys construct which are self-belonging, inclusivity, organizational/political participation, recognition, legitimacy, and equality are conceptually sound and culturally relevant. The Fuzzy Delphi Method proved effective in achieving expert consensus. Although limited to the content validation phase, this work provides a strong foundation for further empirical research. By advancing the measurement of intra-ethnic cohesion, this study contributes both theoretically and practically to the study of social cohesion in Malaysia.

This research serves as a crucial step toward fostering harmony and stability, highlighting the importance of targeted efforts to strengthen shared values, promote equality, and ensure inclusivity. The study sets the stage for future investigations and policy interventions that can further bolster social cohesion in diverse yet homogeneous community contexts.

Author Contributions

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Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used ChatGPT and PaperPal to improve the clarity of the language and readability of the article. After using these tools, the authors reviewed and edited the content as needed and took full responsibility for the content of the published article.

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